

We claim:

1 1. A method for controlling an electronic device comprising:
 2 receiving one or more bioacoustic signals, each signal related to one or more hand
 3 gestures;
 4 determining the identity of the one or more hand gestures based on a positive correlation
 5 between the received signals and predetermined hand gesture data; and
 6 selectively issuing one or more commands associated with the identified hand gesture for
 7 activating one or more functions of the electronic device.

1 2. The method of claim 1, wherein the one or more hand gestures includes a first gesture
 2 which reflects contact between a thumb and an index finger of a human hand, a second gesture
 3 which reflects contact between the thumb and a middle finger of the human hand, a third gesture
 4 which reflects contact between the thumb and a ring finger of the human hand, a fourth gesture
 5 which reflects contact between a finger and a fingernail, a fifth gesture which reflects non-
 6 contact between one or more fingers, a sixth gesture which reflects contact based on a
 7 displacement threshold and a seventh gesture which reflects contact based on a pressure
 8 threshold.

1 3. The method of claim 1, further comprising activating a wireless transmitter to transmit
 2 the command.

1 4. The method of claim 1, further comprising:
 2 amplifying the bone-conducted sound based signals; and
 3 digitizing the bone-conducted sound based signals.

1 5. The method of claim 1, further comprising:
 2 transmitting the command with a wireless transmitter.

- 1 6. The method of claim 1, further comprising:
2 encrypting the one or more commands associated with the detected hand gesture.
- 1 7. The method of claim 1, further comprising:
2 decrypting the one or more commands associated with the detected hand gesture into one
3 or more electronic device commands.
- 1 8. The method of claim 1, further comprising:
2 transmitting the one or more commands command with a wireless transmitter.
- 1 9. The method of claim 1, further comprising:
2 narrowcasting the one or more commands with a wireless transmitter to the electronic
3 device.
- 1 10. A wrist adaptable wireless apparatus for invoking functions of a portable wireless device,
2 comprising:
3 a processor coupled to at least one piezo-electric contact microphone which receives
4 sensor signal data;
5 a storage facility for storing a plurality of gesture patterns, wherein the processor is
6 operative to compare sensor signal data with the plurality of gesture patterns, to detect a
7 substantial match between the sensor signal data and one of the plurality of gesture patterns, and
8 to select one of a plurality of user input commands associated with the match, wherein the
9 plurality of user input commands correspond to a plurality of functions of the portable wireless
10 device; and a wireless transmitter coupled to said processor and operative to wirelessly transmit
11 the user input command to the portable wireless device.
- 1 11. The apparatus of claim 10, further comprising:
2 a portable power supply.

1 12. The apparatus of claim 10, wherein the apparatus senses bone-conducted sound of a
2 human hand.

1 13. The apparatus of claim 10, wherein the apparatus is configured as a wristwatch.

1 14. A wireless control system comprising:
2 a bioacoustic sensor component;
3 a digital processor coupled to the sensor component;
4 a storage component for storing gesture pattern data indicative of a plurality of gestures,
5 each gesture corresponding to a unique one of a plurality of electronic device commands wherein
6 the processor is operative to compare acoustic sensor signals with the gesture pattern data and to
7 select one of the electronic device commands corresponding to a gesture that correlates with the
8 acoustic sensor signals; and
9 a wireless transmitter and antenna coupled to the processor and operative to transmit the
10 electronic device command.

1 15. The system of claim 14, wherein the transmitter is embedded in a ring structure.

- 1 16. The system of claim 14, further comprising:
2 an audio component for providing user feedback when a gesture is sensed.
- 1 17. The system of claim 14, wherein the system is operative for receiving information from a
2 plurality of external information sources.
- 1 18. The system of claim 14, wherein the processor, storage component and wireless
2 transmitter and antenna are remotely located away from bioacoustic sensor component.
- 1 19. The system of claim 14, wherein the band is comprised in part of piezo-electric material.
- 1 20. A method comprising:
2 training a user in one or more hand gestures so that the one or more hand gestures
3 corresponds to one or more device commands;
4 receiving one or more bioacoustic signals, each signal related to the one or more hand
5 gestures;
6 determining the identity of the one or more hand gestures based on a positive correlation
7 between the received signals and predetermined hand gesture data; and
8 transmitting one or more commands associated with the identified hand gesture for
9 activating one or more functions of the electronic device.